

Serial No. 09/925,008

Docket No. K-0310

Amdt. dated May 12, 2004

Reply to Office Action of February 12, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of selecting a base transceiver system in a communication system comprising ~~the steps of:~~

at least one base transceiver system providing to a mobile station load information that is a receiving probability of a signal;

A) the mobile station deciding a forward data transmission rate according to a channel state of the signal received from the base transceiver system;

the mobile station selecting a certain base transceiver system with which the mobile station will communicate using the provided load information and the decided forward data transmission rate; and

the mobile station requesting ~~[[the]]~~ a forward data transmission to the selected base transceiver system.

2. (Currently Amended) The method as claimed in claim 1, wherein ~~at the load information providing step,~~ the receiving probability is in reverse proportion to the number of mobile stations which the base transceiver system includes as its active set.

3. (Currently Amended) The method as claimed in claim 1, wherein the receiving probability is determined from a [""]value obtained by dividing a length of a slot that received data by a length of a slot that requests the data to the specified base transceiver system.[""]

AI
4. (Original) The method as claimed in claim 1, wherein the receiving probability becomes different according to a kind of service and priority of the data received from the base transceiver system.

5. (Original) The method as claimed in claim 1, wherein the load information is transmitted to the corresponding mobile station using a synchronous control channel, asynchronous control channel, or dedicated channel.

6. (Currently Amended) The method as claimed in claim 1, wherein ~~the selection step of the~~ selecting a certain base transceiver system ~~includes the steps of~~ further comprises:

multiplying the load information provided for each base transceiver system by the forward data transmission rate determined for each base transceiver system;

comparing values calculated for the respective base transceiver system with one another; and

selecting the base transceiver system having the largest value according to a result of comparison.

AI

7. (Original) The method as claimed in claim 1, wherein the respective base transceiver systems belong to the active sets activated by the mobile station.

8. (Currently Amended) The method as claimed in claim 1, wherein ~~at the requesting step~~, the mobile station requests the forward data transmission to the base transceiver system through a data rate control (DRC) channel of a reverse link.

9. (Original) The method as claimed in claim 8, wherein the data transmission rate information of a forward link to be transmitted from the base transceiver system and the information on the base transceiver system selected by the mobile station are inserted into and transmitted through the DRC channel.

10. (Currently Amended) The method as claimed in claim 1, further comprising ~~the~~
~~steps of:~~

~~after the requesting step,~~ the base transceiver system receiving the DRC channel
transmitted from the mobile station;

the base transceiver system checking the mobile station that completes the DRC
channel transmission until $[(\text{present slot time}) - 1 - (\text{present slot time mod (DRC channel length)})]$;

AI the base transceiver system determining the data transmission scheduling for one among the
checked mobile stations according to the received DRC channel information; and

performing the data transmission according to the data transmission rate
requested by the corresponding mobile station according to the scheduling.

11. (Currently Amended) A method of selecting a base transceiver system in a
communication system comprising ~~the steps of:~~

receiving probability information and channel state information through a forward
link;

estimating a forward data transmission rate corresponding to the channel state
information;

selecting a corresponding base transceiver system in which the estimated forward data transmission rate and a value proportioned to the receiving probability in an active set become maximum; and

requesting a forward data transmission to the selected base transceiver system.

As 12. (Currently Amended) The method as claimed in claim 11, wherein ~~at the load information providing step,~~ the receiving probability is in reverse proportion to the number of mobile stations which the base transceiver system includes as its active set.

13. (Currently Amended) The method as claimed in claim 11, wherein the receiving probability is determined from a [""]value obtained by dividing a length of a slot that received data by a length of a slot that requests the data to the specified base transceiver system.[""]

14. (Original) The method as claimed in claim 11, wherein the receiving probability becomes different according to a kind of service and priority of the data received from the base transceiver system.

15. (Original) The method as claimed in claim 11, wherein the load information is transmitted to the corresponding mobile station using a synchronous control channel, asynchronous control channel, or dedicated channel.

16. (Original) The method as claimed in claim 11, wherein the receiving probability information is transmitted to corresponding mobile stations in case that the corresponding base transceiver system is included in an active set of a new mobile station.

17. (Original) The method as claimed in claim 11, wherein the receiving probability information is transmitted to corresponding mobile stations in case that the active set is changed over a threshold value.

18. (Original) The method as claimed in claim 11, wherein the receiving probability information is periodically transmitted to corresponding mobile stations according to a timer, or non-periodically transmitted according to a request of the corresponding mobile station.

19. (Original) The method as claimed in claim 11, wherein the mobile station is a mobile station that can perform data transmission/reception with at least two base transceiver systems.

20. (Original) The method as claimed in claim 11, further comprising the steps of:
calculating a bit error rate or packet error rate from the channel state information; and
determining the data transmission rate according to the calculated bit error rate or
packet error rate.

A | 21. (New) A method of selecting a base transceiver system in a mobile station,
comprising:
receiving load information corresponding to each of a plurality of base transceiver
systems;
deciding a data transmission rate based on channel state information;
selecting a base transceiver system from among said plurality of base transceiver
systems using said received load information and said data transmission rate; and
establishing data transmission with said selected base transceiver system.

22. (New) The method of claim 21, wherein said load information of each of at least
one base transceiver system is a receiving probability of a signal.

23. (New) The method of claim 22, wherein said receiving probability of each of at least one base transceiver system is in reverse proportion to the number of mobile stations the corresponding base transceiver system includes as its active set.

AI 24. (New) The method of claim 22, wherein said receiving probability is determined from a value obtained by dividing a length of a slot that received data by a length of a slot that requests the data to a specified base transceiver system.

25. (New) The method of claim 21, wherein said deciding a data transmission rate is based on channel states of signals received at the mobile station from said at least one base transceiver system.

26. (New) The method of claim 21, wherein said selecting further comprises:
multiplying said received load information from each base transceiver system by said data transmission rate decided for each base transceiver system;
comparing values of said multiplying results; and
selecting a base transceiver system having the largest value according to said comparing result.

Serial No. 09/925,008

Docket No. K-0310

Amdt. dated May 12, 2004

Reply to Office Action of February 12, 2004

27. (New) The method of claim 21, wherein said at least one base transceiver system belongs to an active set activated by the mobile station.

Al 28. (New) The method of claim 21, wherein said channel state information is obtained from a pilot signal sent from said at least one base transceiver system.

29. (New) The method of claim 21, wherein said load information is receiving probability information.
